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ABSTRACT

Initial steps have been taken at the national and state levels to eventually implement more rigorous procedures for screening and selecting teacher candidates. In most instances, however, the early stages of this process have focused primarily upon academic criteria for selection. Several research projects in recent years have attempted to identify and study "effective" teachers, and these efforts have suggested that many of the significant variables that seem to be associated with effective teaching are non-academic in nature. Instead, they indicate that personality factors, affective variables and value system factors, among others, are important in understanding the characteristics of effective teaching. The review of literature undertaken in this study was intended to compile the findings of the numerous investigations into non-academic factors associated with effective teaching and to analyze those findings to discover common patterns and trends. Conclusions were drawn and offered for consideration in the development of national and state certification procedures. Suggestions were also made for how this information can be integrated into procedures for identifying and selecting teacher education candidates for admission to teacher training programs. Sixty-eight references are appended.
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NON-ACADEMIC INDICATORS OF TEACHER EFFECTIVENESS- A REVIEW OF THE LITERATURE

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A paper presented at the Mid-South Educational Research Association Annual Meeting, November 11, 1987, Mobile Alabama

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Non-academic Indicators of Teacher Effectiveness-
A Review of the Literature

Abstract

In recent years the level of rhetoric concerning minimum qualifications for teachers has risen, and initial steps have been taken at the national and state levels to eventually implement more rigorous procedures for screening and selecting teacher candidates. However in most instances, the early stages of this process have focused primarily upon academic criteria for selection. Examples include NCATE's recent recommendation that students entering a teacher education program have at least a 2.5 GPA, or the implementation in several states of competency tests taht primarily focus on knowledge of teaching and/or subject matter. On the other hand, several research projects in recent years have attempted to identify and study "effective" teachers, and these efforts have suggested that many of the significant variables which seem to be associated with effective teaching are non-academic in nature. Instead, they indicate that personality factors, affective variables and value system factors, among others, are important in understanding the characteristics of effective teaching. The review of the literature undertaken in this study was intended to compile the findings of the numerous investigations into non-academic factors associated with effective teaching and to analyze those findings to discover common patterns and trends. Conclusions were drawn and offered for consideration in the development of national and state certification procedures. Suggestions were also made for how this information can be integrated into procedures for identifying and selecting teacher education candidates for admission to teacher training programs.

NON-ACADEMIC INDICATORS OF TEACHER EFFECTIVENESS-
A REVIEW OF THE LITERATURE

Over the past ten years or so, there has been a burst of activity and interest in the assessment of teacher competence, primarily for the purpose of certifying teachers, or for the purpose of verifying the basic skills of inservice teachers (Adams, 1985; Broudy, 1986; Cole, 1987; Haertel, 1987; Lehmann & Phillips, 1987; Martin, 1986; Pipho, 1986; Poggio, et al., 1986; Pugach & Raths, 1983; Short, 1985; Soar, et al., 1983; Stedman, 1984; Woolever, 1985). Calls for reform of education and of teacher education have included such elements as raising admission standards for entry into teacher education programs (e.g., Martin, 1986; Watts, 1980), and establishing national certification boards for licensing professional teachers (e.g., Cole, 1987; Haertel, 1987). It is worth noting that this level of interest in the competence of teachers is not new (e.g., Tyler, 1985), but is perhaps distinctive in that it coincides with an existing and growing teacher shortage.

Another hallmark of today's reform movement is the central role of teacher effectiveness as a focal point for many of the recommendations being offered. This emphasis upon teacher effectiveness is doubtless due to our more outcome-oriented thinking in education, as contrasted with past periods, as well as the current availability of a growing body of research-based literature regarding teacher effectiveness. One unfortunate by-product of this convergence of the reform movement with the teacher effectiveness research is the preoccupation with teachers and their skills in attempting to reform education. While there is doubtless a need to look to the improvement of teachers and teacher preparation, it is also true that there are numerous other facets of the education and even societal enterprise that deserve equal scrutiny.

Status and Trends in Selective Admissions for Teacher Educators

While much of the debate concerning teacher education centers around the assessment of candidates following the completion of a teacher training program as part of the certification process, some of the attention has been focused on the matter of selective admissions (Kay, 1978; Laman & Reeves, 1983; McDonald, 1978). One example of this is the article by Watts (1980) who decries the generally low standards exercised in the selective admissions of teacher education candidates. While Watts seems primarily interested in raising the criteria in traditional areas (SAT, ACT, GPA, etc.), there are others who have proposed more extensive efforts to accurately identify the most promising teacher education candidates while screening out the unqualified.

Benner et al. (1987) describe the admissions procedure established at the University of Tennessee, which consists of examination of academic credentials but also entails extensive interviewing of candidates by a faculty admissions board. Interviews focus, in part, upon the responses of applicants to questionnaires addressing such issues as motivation for choosing teaching, experience with children, and attitudes toward teaching. Laman and Reeves (1983) surveyed 121 teacher education institutions to determine what procedures they employed in selectively admitting teacher education candidates. What they learned was that 95% of all surveyed institutions used GPA as a criterion, and that the minimum GPA had risen since 1972 from 2.0 to 2.5. Most respondents required a formal application (91.7%). Other trends seemed to be a growing dependence upon standardized tests (17.2% in 1972 compared to 41.3% in 1982) and a decrease in the use of physical and psychological examinations (41.1% in 1972 compared to 19.0% in 1982 for physical exams, from 12.8% to 6.6% for psychological exams). Concerning criteria failed by applicants, 108 of 121 respondents reported that some students had failed. The most common criteria failed was GPA (32 of 108 institutions reported failures in that area), with standardized tests and written language tests following.

Applegate (1987) in reviewing the status of teacher candidate selection focuses on central questions that must be part of the debate concerning selective admissions. What is the purpose of selection; by what standards and criteria will candidates be judged; what will (should) be the role of professional judgment; and what are the ethical and legal issues raised when selectively admitting teacher education candidates? Applegate argues for flexibility in admissions, to reflect the developmental nature of teacher training, and points out that setting specific standards and criteria may be premature in the light of the limited empirical evidence linking currently advocated criteria to specific teacher outcomes. Applegate notes with regard to professional judgment that at present it is the candidate who exercises the greatest judgement in self-selecting for teacher education, and observes that professional judgment by teacher education personnel may focus on entirely different criteria than would the judgments of the school official who will assume responsibility for those who are selected to teach. Finally on the matter of judgment, Applegate describes the increasing extent to which the judgment is moving away from the teacher training institution and to the policy makers in government. Concerning ethical considerations, Applegate raises the problem of making selection decisions in an atmosphere of potential litigation. The Uniform Guidelines on Employee Selection Procedures of the Equal Employment Opportunity Commission require clearly stated criteria for admission and retention in programs of study, and make manifest the need for those criteria to be clearly related to the qualifications for entry into the profession. Moreover, with the ranks of minority teachers shrinking at the very time that minorities make up a growing proportion of the school age population, the impact of more selective criteria must be all the more carefully considered.

Mercer (1984) describes the efforts of one university to address the question of teacher education quality without making academic credential the overriding criteria for admission. Mercer advocates attention being given to past accomplishments of the candidate and an admission process based upon the potential of the candidate rather than their standardized test scores. The admissions process should also focus on competency assessment (e.g., leadership, sensitivity, oral and written communication skills, skills of organization and planning, flexibility and adaptability), according to Mercer. In the more prescriptive vein, Van Patten (1977) describes the way an introduction to education course can be used to screen candidates for teacher education, while providing them with counseling and field experiences early in their academic program. Finally, Barone (1987) notes the importance of the social reconstructionist perspective to the training of teacher as change agents. He observes that most of the efforts at improving the selection process in teacher education have reinforced the adaptationist perspective. Barone uses a biographical case study to demonstrate his concern and he concludes by arguing for the replacement of traditional criteria for teacher candidate selection (standardized test scores, GPA) with more progressivist methods including assessment of professional commitment by a panel of teacher educators.

Academic Indicators and Teacher Effectiveness

An examination of the reform literature reveals that many calls for reform of teacher education programs begin (and too often end) with the suggestion that standardized test score and grade point average requirements be raised as a precondition for admission to teacher training (e.g., Watts, 1980). And in fact, surveys of teacher training institutions have indicated that most employ these two criteria, often in the absence of any other specific indicators (Applegate, 1987, Laman & Reeves, 1987). (For the balance of this paper, I am going to refer to these categories of indicators as "academic" indicators, as they seem to largely overlap with the academic domain. This approach to labeling will doubtless prove limiting in the sense that later I will probably make reference to indicators that could be

challenged as also being "academic" in nature. For the purposes of this paper, I wish to simply make the distinction between the prevalent approaches to predicting and/or judging teacher effectiveness and those that are less popular but promising).

The extensive use being made of indicators such as standardized test scores and grade point averages is, in part, due to the relative ease with which such measures can be gathered; in part, due to the fact that absolute minimums are more readily established (if not defended); and in part because these objective criteria are less likely to be successfully challenged in the courts as arbitrary and capricious. Unfortunately, these indicators also have a number of shortcomings. They are severely limited in the scope of the characteristics they consider compared to the variety of characteristics that might be examined. Perhaps more importantly, research seeking to link academic predictors to teacher effectiveness has been largely unsuccessful (e.g., Dobry, et al., 1985).

It is likely that these indicators are deemed important due to the widely held perception that teacher education majors are academically inferior to non-education majors (Watts, 1980), and therefore special attention must be given to the matter of screening out the academically unqualified student. The impression that teacher education majors must be academically less talented than their non-education peers stems in some measure from the popularized reports that education majors are drawn from the lowest quartile of their high school graduating classes and have the lowest SAT or ACT scores among groups attending college. However, in study after study comparing teacher education graduates to graduates of other programs, no significant differences have been found in the academic achievement of the two groups (ERIC clearinghouse on teacher education, & Stewart, D.K., 1986).

The obvious (and I believe correct) implication of this research is that many students enter teacher training programs less well prepared academically than their non-education counterparts, but by the time they complete their programs, they are the academic equals of their non-education counteparts. Rather than standing as an indictment of teacher training programs and their students, this research seems to be clearly demonstrating that teacher training programs have a beneficial impact on preservice teachers and such programs are at least as effective in producing qualified graduates as are the other degree programs on campus. Of greater concern is the observation that academic indicators have a poor track record in predicting teacher success.

Assessment of Teacher Effectiveness- the Criterion Problem

In considering the prediction of teacher success, a central issue has been and continues to be the problem of defining and measuring the criterion variable, teacher effectiveness (Berliner, 1976; Kennedy & Bush, 1976). This problem is going to exist whatever the predictor variable may be. The problem is one of specifying and measuring the criteria (i.e., teacher effectiveness). Until or unless methods for validly and reliably measuring teacher effectiveness are developed and employed, the effort to empirically identify good predictors of teacher effectiveness will be frustrated. And so long as valid relationships between predictors and criteria cannot be demonstrated, attempts to establish admission standards and certification standards for teachers must rest solely upon accumulated wisdom, at best, and legislative hysteria at worst.

Fortunately, there are promising avenues for assessing teacher effectiveness and thus making the entire enterprise of predicting and judging more defensible. However, the current methods, such as basing ratings of teacher effectiveness on principal's evaluations or on years of experience, are being shown to be inappropriate and not related either to student achievement gains or to student's perceptions of teacher effectiveness (Medley & Coker, 1987; Peterson, 1987). Moreover, the work underway today to explore the dimensions of teacher effectiveness

with techniques such as observational systems promises to influence the next generation of assessment methods for certifying teachers.

Among those who have written about alternative approaches to assessment of teacher effectiveness for certification are Gibney & Wiersma (1986) who have offered a profile analysis approach to the evaluation of student teachers; Peterson (1987) who explored the assessment of teachers using multiple lines of evidence and concluded that more valid assessment result when approaches other than the traditional principal ratings are used; Pugach & Raths (1983) who examined the status of teacher testing and pointed out fallacies (such as the idea that raising teacher education standards will necessarily attract better qualified students); Rosenshine (1977) who suggested a national teaching contest to help in identifying relevant characteristics of outstanding teacher; and White et al. (1987) who advocate basing assessment of teachers on evidence of competence-related skills identified through observational methods.

Non-academic Indicators of Teacher Effectiveness

Nearly twenty-five years ago, Getzels and Jackson (1963) reviewed the literature concerning teacher personality traits and teacher success, and concluded that the field was chaotic, and yielded little useful information for better understanding the field of teaching. In retrospect it can be observed that what they reviewed was research into things like the relationship between scores on the MMPI and principal's ratings of teachers, which could hardly have been expected to reveal much beyond the confirmation that most teachers were not psychopathic deviants and most principals were willing to give favorable ratings to teachers irrespective of any intrinsic differences that might exist among them.

Perhaps the single greatest liability of the research being conducted at that time was the primitive state of affairs characterizing the assessment of relevant teacher personality dimensions. Moreover, the field of cognitive psychology that today provides such a rich source of theory and research into teaching and learning, did not at that time exist as a recognized discipline. The regrettable result of the rather final-sounding pronouncement of irrelevance found in Getzels and Jackson was to virtually end research into teacher personality traits. More recently, interest seems to be renewed in the area of teacher personality characteristics, including cognitive traits and strategies, in attempting to understand what makes for an effective teacher. Indeed, this renewed interest has perhaps been necessitated by the recognition, substantiated by careful investigation, of the remarkable complexity entailed in teaching (e.g., Shulman,1984, who suggests that the role of the teacher is significantly more complex than that of the physician).

Models for Categorizing Non-academic Indicators of Teacher Effectiveness

There are a number of ways to go about the grouping and categorizing of the various indicators that might be productive in gaining insight into teacher effectiveness. For example, one approach might be to divide the indicators and traits into domains paralleling the familiar domains of instruction (cognitive, affective, psychomotor). Traits and indicators that would fall within the cognitive domain would include planning, organization, clarity, cognitive style, reasoning, and flexibility, among others. In the affective domain would be found warmth, self-awareness, self-concept, the entire area of attitudes and values, expectations of self and others, to note a few. The psychomotor domain might be the appropriate place to include skills such as writing skills and oral communication skills, visual scanning, and such indicators as work samples, the ability to engage students in learning activities, and the ability to perform the functions required of teachers. Admittedly, the traits and indicators noted do not fit perfectly into the three domains, nevertheless the model offers a means to categorize the various elements of teacher effectiveness.

An alternative approach to categorizing traits and indicators might be to distinguish those traits that are modifiable from those that are not (or are not easily modified). Such an approach would be helpful in making decisions about selection and certification, in that those traits that can be modified should not serve as absolute criteria, but could instead be approached in a diagnostic fashion, especially when the decision is whether to admit a student to a teacher training program. On the other hand, those traits and characteristics which cannot be modified, or cannot be modified within the constraints of a teacher education program, might serve as more absolute standards. This model could force academic and professional decision makers to seriously consider not only what traits and characteristics are important in selecting teachers, but also to closely examine the mission of the teacher training program and determine what it realistically can do and must do in preparing the whole person as a teacher. A number of authorities are noting with concern the relative absence of teacher training components which deal with some of the most central aspects of teaching (e.g., Berliner, 1985) such as the ability to judge, and even the ability to think abstractly.

A final model might be based on the purpose of assessment. That is, as we examine the candidate, what purpose is being served? In the case of the student seeking entry into the university, the purpose of assessment should be to ascertain if the student possesses the academic potential to succeed in college-level work. In the admission of candidates into the teacher training program, the purpose should be to determine whether the candidate possesses the prerequisites for becoming a professional teacher. Among these prerequisites might be proficiency in oral and written communication, commitment to teaching, freedom from serious emotional and personality disorders, capacity for reasoning abstractly, and the capacity for dealing with children as learners. Ultimately, the body serving to certify the candidate to teach might be interested in verifying the candidate's command of subject matter knowledge, the candidate's ability to demonstate specific instructional skills, the candidate's familiarity with theory of pedagogy and ability to draw upon that theory to deal with ill-defined problems in the classroom, and the candidate's understanding of the ethics of teaching, among other matters. By determining why the candidate is being assessed and by coordinating assessment to reduce overlap, the resultant model is one that is efficient and more likely to result in proper decisions being rendered at each stage in the process.

The Literature on Non-academic Indicators of Teacher Effectiveness

As was noted earlier, following the review of research related to teacher personality traits and teaching effectiveness by Getzels and Jackson, the volume of subsequent writing about teacher personality traits dropped sharply. Since that time, the literature that has been produced can conveniently be divided into empirical research and discussion or logical analysis. The discussion type literature predominates in the period this study sought to review.

Cognitive indicators of teacher effectiveness

One of the areas in which an appreciable amount of research has taken place is in the area of cognitive styles of teachers and learners. Examples include a study by Frank (1986) examining the relationship between field dependence and area of specialization among teacher education majors. Frank found that teacher education majors who specialized in the areas of natural sciences, mathematics, and business were significantly more field independent than majors in the areas of humanities, family and child development, home economics, special education, and speech pathology. One important implication for such a finding is in the area of academic counseling, as the trait being assessed is relatively stable and so might be relied upon to indicate effective matches between the student's cognitive style and the area in which they choose to teach.

Ekstrom (1976) explored the relationship between cognitive and attitudinal characteristics and the instructional behavior of elementary school teachers. Significant findings from the study were that cognitive style was negatively related to a measure of social control and management, and that aspirations, an affective measure, was negatively related to the practice of having pupils working independently of the teacher. One serious limitation of the study was that it looked for commonalities across two different grade levels and in two different subjects. It was speculated that more consistent patterns among the other cognitive and affective indicators might have been masked by this level of consolidation of findings.

Stone (1976) also studied the role of cognitive style in teaching and learning. Stone found that field dependent teachers were more likely to spend time in direct instruction, in practice or review of skills and facts, and to use more instructional materials. Field independent teachers typically employed the instructional techniques of explanation, discussion, and more sustained questioning. The majority of teacher performances which predict student learning were not found to be more characteristic of field dependent than field independent teachers. Also, when second grade mathematics learning was examined separately, the learner's cognitive style was found to be the best single predictor of achievement in concepts, computation and applications.

Reyes (1987) examined the cognitive development of undergraduate education and non-education majors using Piagetian tasks of classification, conservation, proportional reasoning, images, and relations. No significant differences were found between the two groups, confirming that teacher education majors are not less abstract thinkers than students in other majors. Disturbingly, Reyes investigation also concluded that students in both groups were operating at levels below those predicted by Piagetian theory. This finding corroborates a preliminary study conducted by Swann and Flaitz (1985) examining teacher education majors at the undergraduate and graduate levels which found that both groups tended to be at an upper concrete operations level rather than at the formal operations level. Implications for these findings are two-fold, first they should raise concerns over whether teacher training graduates will be able to deal on an abstract level with the subject matter materials and the decisionmaking required of them in the classroom, and second, it should raise concerns regarding the appropriateness of teaching methods in the teacher training program, to the extent that such methods presuppose certain cognitive skills and traits that may very well be absent.

Copeland (1987) studied the relationship between the cognitive abilities of student teachers and their observed classroom management skills. The cognitive abilities Copeland investigated were vigilance and multiple attention. The results of the study were not clear cut but suggested that student teachers who exhibit high levels of vigilance and multiple attention skills are associated with classes where the students were on task a greater percentage of the time. However, there were no consistent relationships observed between the cognitive abilities and the observed student teacher performances (e.g., actual use of desist techniques) due in part to the small number of occurrences of those teacher performances.

In a study examining both cognitive and affective traits, Pittman (1985) focused on measures of warmth, organization, and creativity and sought evidence of relationships between these characteristics and student's ratings of 17 elements of instructional effectiveness. Results suggested that teacher organization had the greatest influence on judgments of overall effectiveness and amount learned, while teacher understanding (warmth) was most strongly associated with the level of student effort.

Parker and Gehrke (1986) studied teacher decision-making using a stimulated recall method which involved taping instructional periods and then reviewing the tapes and eliciting explanations from the teacher's as to why they made the

decisions they made. It was posited that teacher decision-making is interrelated with the context of the decision and therefore should be considered as an interactive decision-making (IDM) process. Three hypotheses were tested regarding the concept of IDM. The first suggested that IDM was embedded in classroom learning activities, and the researchers concluded that there was evidence to confirm that teacher decision-making arises out of the learning activity (as opposed to instructional planning). The second hypothesis was that the primary intention of the teacher during interactive teaching is to move the learning activity toward completion. Again the evidence of the stimulated recall exercises seemed to confirm that teacher's decisions at each stage of the learning activity were primarily geared toward the fulfillment of an image of activity closure which they held. The third hypothesis was that decision rules and routines support teacher intentions to move learning activities forward toward completion. The conclusion drawn regarding this hypothesis was that decision rules and routines seemed to operate along a continuum in which some decision rules and routines were apparently intended to further the students understanding of concepts while others were more clearly associated with getting the work done. The significance of this study for understanding teacher effectiveness and the characteristics of effective teachers is its clear emphasis upon an understanding of the teacher's cognitive processing (decision-making) in determining what teacher do (and ultimately perhaps what they ought to do).

A final example of research into cognitive skills of effective teachers is a study by Neely (1986) who investigated the roles of planning and problem solving in teacher education. Specifically the cognitive component Neely explored was cognitive monitoring, a concept closely related to meta-cognition, and the subject of much speculation and investigation in cognitive psychology. The study employed an experimental design (randomized pre-post test control group design) and provided as the treatment training in cognitive monitoring. The subjects were student teachers and the dependent measure was performance as assessed by selected portions of the Georgia Teacher Performance Assessment Instruments (TPAI). The results supported the experimental hypotheses that subjects trained in cognitve monitoring would perform at a statistically higher level than would the control group on measures of lesson planning and implementation. The two most important implications of Neely's study for the identification of effective teachers are that cognitive monitoring can serve as a predictor of one aspect of teacher effectiveness (lesson planning and implementation) and also that teacher training programs should place greater emphasis upon the development of cognitive monitoring skills among preservice teachers.

In addition to these types of research articles, another source of literature on teacher cognitive traits is the review article. Clark and Lampert (1986) reviewed the literature related to teacher thinking and found fewer than 25 primarily descriptive studies of the ways that teachers plan and deal with uncertainty. They were able to conclude that teacher planning is rarely a straight-forward linear and rational process, but rather it seems to be cyclical and interactive. Clark and Lampert also add the caveat that research on teacher thinking should not be used to derive prescriptions for how novices ought to think or be trained. Rather they feel that such research can best be applied to better prepare preservice teachers for the complexities and uncertainties they will face when they teach.

A second article by Hosler and Schmid (1985) reanalyzed factor analytic studies of teacher characteristics at the elementary, secondary, and college level. Despite problems occasioned by the differences in instruments used in the several studies which were re-examined, the investigators concluded that a teacher is generally perceived as a director of the learning process who is well informed about subject matter and able to present the material in a stimulating and confident manner. A second relevant dimension turned up by their work was the importance of the teacher

being perceived as sympathetic toward the problems of learners and being fair in evaluations of achievement. Generally their research tended to substantiate the significance of specific cognitive and affective traits in teachers.

Yet another category of articles concerning cognitive characteristics of teachers includes articles that primarily discuss cognitive traits and the implications for teacher effectiveness and training. One example of this type of article is offered by Cruickshank (1985a) with his examination of findings on teacher clarity. Among the findings are: teacher clarity is a multidimensional phenomenon; teacher clarity appears to be stable; certain teacher clarity behaviors are more central and important than others; teacher clarity is related both to student achievement and satisfaction; learners judge a teacher's effectiveness in large part on the basis of clarity; teacher clarity can be enhanced through training. These findings, in turn, led Cruickshank to several tentative conclusions- the selection of preservice teachers can be improved by assessing the clarity behavior of applicants; the curriculum for preservice teachers can be improved if it attends to what is known about clarity and provides students with opportunity to practice clarity behaviors; instruction of preservice teachers can be improved when faculty members are both knowledgeable of teacher clarity and incorporate clarity-related behaviors in their repetoire of teaching skills; evaluation of teachers can be improved by assessing their clarity.

Hansen (1981) also drew upon a number of sources to conclude that "good" teachers can be distinguished from "bad" teachers, that "the most significant weakness of teacher effectiveness research has been its failure to observe teachers in the process of teaching", that combinations of teaching performances rather than single performances account for the effectiveness of instruction, and that traits such as cognitive organization and indirectness are much more viable indicators of teacher effectiveness than are such factors as preparation, experience, background, and appearance.

Affective indicators of teacher effectiveness

Another dimension of non-academic indicators includes affective traits and characteristics, both intrinsic (such as personality characteristics) and developmental (such as attitudes and values). As was the case with cognitive traits research, the total volume of published material is not great, and can be divided into empirical research and discussion articles.

Ekstrom (1976) included in her study of teacher aptitudes, knowledge, attitudes and cognitive styles as predictors of teaching behavior, several measures of teacher attitude. These included aspiration (composite of items assessing leadership, recognition and opportunities), satisfaction (items dealin with various aspects of satisfaction with school, teaching as an occupation, and contacts with teachers and administrators) and perception of student characteristics (items about judgments of student educational background, socioeconomic level and difficulty in controlling students). As was noted earlier, the investigator sought general trait-teaching behavior relationships and therefore opted to consolidate data representing two different grade levels and two different subjects. This decision may have masked important relationships which were either grade level specific or subject matter specific. In any case the investigator did find a negative relationship existing between the measure of aspiration and the measure of teacher behavior based on observations of the extent to which students were allowed to work independently of the teacher. This finding would seem to suggest that the teachers with the highest levels of aspiration are also those who are least likely to incorporate independent work for students in their instructional planning.

Pittman (1985) also incorporated an affective dimension in his study of perceived instructional effectiveness and associated teaching dimensions. His choice of teaching dimensions was guided by a model offered by Ryans, which

suggested that effective teachers were to be differentiated from ineffective teacher along three dimensions- creativity (as manifested by the use of different teaching methods-materials and ability to adapt instruction to a situation), organization (systematic instructional approach, well prepared) and understanding (warmth, friendliness, approachableness, and patience). Pittman's method was to have student's rate their teachers along the dimensions proposed by Ryans and also to rate them along dimensions of effectiveness as teachers. As was noted earlier, teacher organization was found to be most consistently related to student reports of amount learned and overall effectivness, while teacher understanding was most consistently associated with amount of student effort. Pittman's study suggests that in the assessment of teacher candidates for certification purposes, relatively greater emphasis should be placed on teacher organization, with a lesser emphasis placed on teacher understanding.

Loadman and Mahan (1987) also studied perceptions of teacher effectiveness, but in their study, they examined the perceptions of student teachers toward the effectiveness of their assigned supervising teachers. Student teachers and supervising teachers also completed two standardized attitude toward education scales. The goal of the investigation was to establish a link between the attitude of supervising teachers toward education (specifically the scales yielded indicators of conservatism/progressivism) and the student teacher's perception of their supervising teacher's effectiveness. The results Loadman and Mahan reported were intriguing in that it was found that student teachers gave lower effectiveness ratings to supervising teachers who were extreme, either extremely conservative or extremely progressive in their attitudes toward education.

These findings seemed anomalous in that the researchers had anticipated that student teachers, who historically are found to be more progressive minded than practicing teachers, would rate as more effective those supervising teachers who exhibited teaching strategies based upon progressive education principles. The discovered discrepancy was interpreted as evidence that student teachers may hold progressive values, but are frustrated in their incipient efforts to operate in the classroom employing the more complex and demanding skills associated with progressive educational techniques. Thus, it would seem that the student teachers are inclined to "settle" for an approach that is not extremely traditional, but falls short of the full scale commitment to progressive education goals.

Immediate implications for either predicting future teacher effectiveness or for assessing teacher candidates for important affective traits are not apparent in this study, but it does remind the teacher educator that preservice teachers will often adopt values consistent with a progressivist approach to teaching, but fail to fully appreciate the greater difficulty and time demands associated with successfully practicing progressive educational techniques in the classroom. Without extensive opportunity to develop skills associated with progressive educational goals prior to student teaching, student teachers may be expected to react negatively when confronted with the unexpected complexity they encounter, and their reaction may drive them to a more traditional model of instruction.

Using an interview techniques with elementary school teachers identified as outstanding teachers by their peers, Easterly (1985) explored the extent to which these outstanding teachers manifested seven "pathfinder" traits. The first trait was willingness to take risks and twenty of twenty-four interviewed teachers gave evidence that they were risk-takers. The second characteristic was a sense of right timing. An indicator of this characteristic was the answer given to the question, "Are you able to balance your personal and professional life?" Again, 20 of 24 teachers gave positive responses to this question. A third pathfinder trait is a capacity for loving, and all 24 respondents exhibited this trait. The fourth trait was the acquisition of opposite gender strengths. All of the participants in the study were female, and 17 of the 24 exhibited characteristics of independence and

assertiveness, opposite gender strengths. The fifth trait was a sense of purpose, and 23 of 24 respondents revealed this sense of purpose when they indicated that they would again choose teaching as a career if given an opportunity. The sixth pathfinder trait was a sense of well-being, and while the specific respondent numbers were not given for this trait, it was noted that the more mature teachers enjoyed a greater sense of satisfaction and well-being than their younger counterparts. The seventh and final trait was support networks. Of the 24 respondents, 23 indicated that they did have an effective support network. The investigator concluded by observing that the identification of pathfinders in the profession was important and that further research was necessary to verify which criteria were valid for selecting outstanding teachers. While Easterly's study does not contribute a great deal to the establishment of empirical links between specific affective traits and effective teaching/teachers, it does serve to suggest that those teachers who are considered the outstanding teachers by their peers seem to consistently exhibit affective characteristics of caring, self-confidence, risk-taking, and purpose, among others.

Gurney (1977) used student ratings of criteria used to evaluate college faculty to conclude that "Dynamism and warmth appear to be important aspects of teaching, as reflected in the high ratings given by college students and educators to criteria related to such humanistic aspects as teacher flexibility, personalization of teaching, good rapport, and sensitivity to the student's point of view" (p.775).

The remaining articles dealing with affective characteristics of effective teachers were discussion and review of previous writings about personal characteristics of teachers. One important theme was the significance of moral and ethical values among teachers. Yeazell (1986) discussed moral sensibility and the relative absence of emphasis placed upon this quality either in the selection of teacher candidates or in their training. She noted the increasing likelihood that teachers would be held accountable for student failures, as well as the moral implications of seemingly straight-forward decisions such as use of classroom time and management. Ultimately, Yeazell calls for a more prominent role for moral education in the training of teachers. Several other authors offered their own perspectives on the matter of ethics in education (Howe, 1986; Johnson, 1986; Soltis, 1986; Watras, 1986) in a theme issue of the Journal of Teacher Education.

Soltis (1986) argues for more than just an ethical code, as established by NEA, suggesting that teacher educators should raise the consciousness of preservice teachers to the complexity of moral reality in the classroom. Moreover, he argues for the inclusion of training in strategies and skills for diagnosing ethical issues and making sound ethical judgments. Howe (1986) offers similar advice, but focuses upon "critical reflection" as the conceptual basis for ethical decision making. Watras (1986) critiques three approaches to improving the ethical behavior of teachers and concludes that generic strategies cannot adequately meet the needs of educators in the development of ethical behavior. Instead he advocates basing ethical inquiry on the work of Martin Buber. Finally, Johnson (1986) addressed the delicate issues attendant to the treatment of religion in a pluralistic, democratic society. After considering several myths regarding religion and education, Johnson calls for a reintroduction of religion into public school education, not as a vehicle for conversion, but as an essential element in development of values in the learners.

While none of the articles on ethics or religion speak directly to the matter of teacher selection based on attitudinal factors related to ethical values, it is at least potentially possible to view moral development or the holding of central ethical values as criteria for entry into the profession of teaching. More difficult, of course, is the matter of valid and accurate assessment.

Other articles related to teacher personality traits discuss the significance of ego development (McNergney & Satterstrom, 1984), suggesting that this trait

influenced the performance of student teachers more substantially than other characteristics typically considered important in teacher success. Doherty (1980) investigated the relationship between self-esteem and teaching performance and that students with low self-esteem were rated as less competent as teachers. Other research (Manning & Payne, 1984; Payne & Manning, 1984, 1985) has explored the relationship between student teacher personality and several outcome variables such as preferred pupils to teach and teaching performance. Those studies also suggested that the personality of the student teacher affects the teaching-learning process. Screening of preservice teachers, and selection of candidates for teacher certification both would seem to be well served if personality traits were considered as part of the process.

One final article reviewed dealt only tangentially with the personality traits of prospective teachers, but rather focused upon the importance of teacher educators to model the desired interpersonal skills which novice teachers must have to be effective (Oseroff, et al., 1986).

Other non-academic indicators of teacher effectiveness

Some skills that would seem to be of some significance and that have received some attention in the literature as criteria for selecting teacher education candidates or as competencies required for certification are nevertheless difficulty to readily categorize as cognitive or affective. Berliner (1986) and Shulman (1986) have both attacked the problems of teacher effectiveness from skills-based perspectives, but both seem to insist that the skills are indicators of a more central understanding of content and pedagogy, while Cruickshank (1985b) has developed the argument that greater emphasis must be place on reflectivity in teaching.

More specifically, the skills of written and oral communication have been researched for their relationship to teacher effectiveness and have been advocated as prerequisites for entry into the field. For example Duke (1985) reported on surveys of college of education faculty, 89% of whom noted serious problems in their student's writing. This despite the fact that nearly every teacher training program requires the student to earn at least "C" grades in their composition courses. Duke goes on to describe a writing assessment process to be used in the selection of teacher education candidates, including scoring and the establishment of minimums for acceptable performance.

McCaleb (1984) studied the assessment of oral communication as a prerequisite for teaching by administering two oral communication assessment instruments (Communication Competency Assessment Instrument, The Synder Speech Scale) to student teachers. Later the student teachers were evaluated for communication competence (clarity) by the assigned supervising teachers. Correlational analysis produced results supportive of the hypothesis that these communication assessment instruments would be positively correlated with the supervisor's ratings. Some limitations of the study were noted and it was suggested that since the assessment of one dimension of teacher effectiveness (communication competence) should not be equated with the more inclusive concept of teacher effectiveness, further investigation was warranted into the relationship between oral communication skills and teacher effectiveness. Finally it was suggested that some form of oral communication assessment be incorporated into the teacher education admission process.

Shalock (1979) reported the results of research that found 7 clusters of criteria for predicting success in teaching. These were work samples, ability to engage students in learning activities, ability to perform the functions required of teachers, skills related to teaching, knowledge related to teaching, experience with children and youth, intelligence and academic ability. Most of these clusters represent skills that can be acquired from teacher training programs, if those programs choose to focus on these skills.

Summary

During a period in which teacher education is being pilloried and in the extreme case circumvented, it is natural that much attention has been directed toward improvement and reform. However, as institutions contemplate abandoning traditional models of training and agencies propose raising the standards of teacher education, it is well to consider what is known about teacher competence and the qualities of effective teachers. After nearly 25 years of second-class status, the time would seem to be at hand to once again consider the role of non-academic indicators such as cognitive skills and personality in the selection and ultimate certification of teachers. It would seem especially fitting for those institutions moving to graduate professional training models to thoroughly investigate the linkage between all potential characteristics of teacher educators and teacher effectiveness before implementing such models. Regrettably, the literature base on cognitive and affective traits of effective teachers is limited, but some possible trends do suggest themselves. It seems clear that the dimensions of clarity, warmth, and organization are important, and may be relatively stable indicators. Many of the investigators reviewed observed the importance of multiple lines of inquiry into teacher competence. Metacognitive skills (cognitive monitoring) as well as cognitive skills of planning and decisionmaking are apparently closely linked to teacher effectiveness, and at present they are neither instructed in nor screened for by most teacher training programs. Ego development, cognitive development, and moral development are all facets of the teacher education candidate that have been linked to effective teaching, and again, these are rarely the focus of attention in selection, instruction or certification.

Recent changes in NCATE accreditation standards may have the desirable effect of compelling teacher training institutions to more closely examine their practices in selecting candidates and in what they provide those candidates by way of training and experience. It seems clear that if teacher education reform is to accomplish any long-term improvement in the teacher training process, it will have to incorporate criteria for teacher candidates that go beyond the traditional academic measures.

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